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EXAMINER

MERCADO, JULIAN A

ART UNIT PAPER NUMBER

1745

DATE MAILED: 10/31/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/977,108

Applicant(s)

ESTREICH ET AL.

Examiner

Julian A. Mercado

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-- Th MAILING DATE of this c mmunication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Objections

Claim 8 is objected to because of the following informalities:

- a. in claim 8 at line 2, it is suggested to change "the received" to --be received--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "said opening" in line 1. There is insufficient antecedent basis for this limitation in the claim. Amending claim 5 so that it depends from claim 4 would obviate this ground of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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At the outset, the examiner notes that dependent claim 1 recites that the positive and negative tab portions are "depending outwardly from a periphery". (line 7-8) It is the examiner's understanding that to "depend" on something is to literally "hang down" from it, based on the French root *dependre*. (side note: one of the inventors is a resident of France)

The limitation "depending outwardly from a periphery" is interpreted in this Office Action accordingly.

Claims 1-7, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Sawada et al. (U.S. Pat. 5,709,966).

Regarding independent claims 1, 10 and 11 and dependent claims therefrom as further noted, Sawada et al. teaches a battery housing [1] which receives a plurality of cells [2]. (col. 7 line 58-67) The cell element, i.e. battery cell which is present in plurality, comprises a plurality of positive plates [22y] and negative plates [22x] separated by a nonconductive separator [28]. (col. 8 line 12-23) Each of the positive and negative plates has respective tab portions, i.e. lug portions [22k]. (col. 8 line 41-65) Each of the positive and negative plates is secured to their respective tab portions by a post or strap [31, 32]. (*ib*) The housing has an inner cover, i.e. resin partition walls [15], which covers the positive and negative plates to the extent that positive and negative plates in adjoining cell rooms are separated. (also applies to dependent claim 3, col. 7 line 65-67) The battery housing in which the individual cells are received, i.e. the instant receiving areas, comprise additional elements of the cell housing such as a plurality of retaining walls, e.g. the container body [10] and the lid [12] on its opposite side. (also applies to dependent claim 3)

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Figure 6 shows a pair of openings, on either side of the cell housing, which allows the positive and negative posts to pass therethrough. (also applies to dependent claim 4) The positive and negative posts, once butted against each other, are welded together by an intercell electrically connecting member [4]. (applies to dependent claims 6 and 7, Figure 12, note the "H-shape" crosssection and the abutment of the posts, col. 12 line 43-47, col. 15 line 4-10) The intercell electrically connecting member is made of lead or lead alloy, i.e. the instant lead insert, and is received by the inner cover as it is passed through its walls. (applies to dependent claim 2, col. 8 line 66 et seq.) The openings in the inner cover include an O-ring, "between the intercell electrically connecting member 4 and the partition wall 15, there are sealing members 7 formed of resin or other material which are resistant to the electrolyte". (col. 10 line 19-22) In Figure 2, because of the connecting part [43], this resin [7] would naturally flow to be an O-ring shape in cross-section. (applies to dependent claim 5)

Claims 1, 7, 8, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Uba et al. (U.S. Pat. 4,346,151).

Regarding independent claims 1, 10 and 11 and dependent claims therefrom as further noted, Uba et al. teaches a battery housing [14] which receives a plurality of cells [28-1]. (col. 2 line 66 et seq.) The battery comprises a plurality of positive plates and negative plates [56, 58] with a separator therebetween (col. 3 line 3-8) Figure 8 shows each battery with its own cell housing [108]. (col. 4 line 3-6) Both the positive and negative plates have respective tab portions [62] (col. 4 line 21-26) An inner cover, i.e. lid member [110] allows for the positive and negative posts to extend therethrough, "[t]abs 62 emanating from one plate are attached to post

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members 63 and a sealed connection take out through lid member 110 via externally expanded rivet member 120 and terminal tab 124. Similarly for the opposite polarity plate rivet member 122 and terminal tab 126 are brought through the lid.” (col. 4 line 21-26) The cells are connected in series. (col. 3 line 11-12, applies to dependent claim 7) The cell housings are received within a complementary area in the battery housing so as to ensure a “snug fit”. (col. 2 line 68, applies to dependent claim 8)

Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Liautaud et al. (U.S. Pat. 4,532,194).

Regarding independent claim 9, Liautaud et al. teaches an outer housing [41] for a battery comprising an internal receiving area [48] defined by a pair of opposing walls, i.e. the walls on either side of the receiving area, a pair of sidewalls disposed between the opposing walls, i.e. the vertical parallel grooves, a bottom [51], a lower end portion below said bottom, and an upper portion [22]. (Figure 3, col. 3 line 35-37, col. 4 line 8-24) Though a fair reading of applicant’s disclosure appears to indicate that the instant “transitional portion” is configured to have an “angled portion 60”, the limitation as presently claimed is absent of any definitive structural features. (see page 6 of the instant specification) Thus, the instant “transitional portion” is given its broadest reasonable interpretation as a portion in the battery housing which is intermediary to a first portion and a final portion. In Liautaud et al., the transitional portion which contains the receiving area [48] is disposed between the upper and lower portions, and further contains an outer configuration for receiving and engaging in complementary fashion with a battery pack or housing [41].

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-6 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uba et al. as applied to claims 1, 10, 7, 8, and 11 above, in view of Sawada et al. as applied to claims 1-7, 10 and 11 above.

The teachings of Uba et al. and Sawada et al. are discussed above.

Additionally, Uba et al. teaches a plurality of retaining walls [25] within the cell receiving areas. (col. 2 line 21-24, applies to dependent claim 3) These walls surround the openings through which positive and negative posts to extend through the inner cover, as seen in Figure 8 wherein the tab [62] is centrally located relative to the retaining walls. (applies to dependent claim 4 and 14)

As to independent claim 12 (method claim), the snug fit in Uba et al. requires the cells to be positioned or inserted into the battery housing in complementary fashion. The positive and negative posts of the cells are welded in place above the cover portion. (col. 3 line 9-13, applies to dependent claims 13, 14)

Uba et al. does not explicitly teach lead inserts for the electrical connection of the cells. However, Sawada et al. as discussed above teaches a lead insert for a similar electrical connection and configuration. The skilled artisan would find obvious to employ lead inserts in

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Uba et al. for reasons such as employing a suitable material for the welding of the leads and employing a conductive material for the electrical connection. (see Uba et al., col. 8 line 66 et seq., applies to independent claim 12 and dependent claims 2, 6)

Uba et al. does not explicitly teach an O-ring for the positive and negative posts as they pass through the cover opening. However, Sawada et al. as discussed above teaches a sealing resin of an O-ring shape or configuration. The skilled artisan would find obvious to employ an O-ring in Uba et al.'s invention consistent with the patentee's desire to maintain a battery cell in "liquid tight fashion". (col. 3 line 56-60, applies to dependent claim 5)

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian A. Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



jam



Patrick Ryan
Supervisory Patent Examiner
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